



## E300 LEVEL CROSSING

Endorsed by more than 800 installations around the world, E300 level crossing (LC) designed by ENYSE is a reliable, robust and easy-to-maintain technology solution.

It has been developed and tested as a continuation of and an adaptation to new electronics and communications technologies, giving the system flexibility and modularity according to railway signaling requirements in terms of safety, reliability, availability and maintainability throughout the duration of its useful life according to standards required by the corresponding CENELEC regulations.

The E-300 system emerged as a continuation of the E-100 family of ENYSE level crossings that have been on the market since 2002.

It is a modular solution for all types of level crossings with the capacity of up to 1024 types or flexible configurations of different level crossing.

E300 is a highly secure system: the architecture of the control unit is based on "2+2" redundancy model. It also features specific software for decision-making assistance.

Connections between the field detection points, protection signals to the machinist and the E300 control unit can be made via cable or wireless technologies.

It is an energy-efficient system that works with solar power, guaranteeing all availability and safety features.

ENYSE designs, manufactures, supplies and installs a full range of level crossing systems: road optical and acoustic signaling without barriers, level crossings with barriers and semi-barriers, level crossings affected by the proximity of interlocking, interlocks and systems to protect pedestrians.

### SIL-4 SAFETY LEVEL

E-300 level crossing complies with SIL-4 fail safety standard. The system was developed and is certified according to the following standards:

- CENELEC EN-50126
- EN-50128
- EN-50129
- EN-50159-1
- EN-50159-2
- EN-50121-4
- EN-50124-1
- EN-50125-3
- CEI-IEC 1025-1990  
Standard FTA
- CEI-IEC 812-1985 FMEA
- Technical requirements for the approval, supply and installation of ADIF
- NTC 020.95-Technical Standard for the circulation of braking distances and signals.
- Technical requirements for "Level Crossing Centralization and Information Processing System."

## SPECIFICATIONS

ENYSE's E300 level crossing has the following features:

### Safety

- Designed according to the highest standard of signaling: SIL-4 (*Safety Integrity Level*).
- Provides the option of having a railway signal that alerts the driver of possible alarms at the crossing.

### Low cost

- Minimal size for greater integration of rack modules.
- Quick installation.
- Minor works required.
- Low energy consumption.

### Cutting-edge technology

- Wired or wireless technology.
- Remote monitoring system for corrective maintenance.
- Integration into the ERTMS/ETCS European signaling system.
- Possibility of interchangeability of the same system in the different types of level crossing. Adaptability with a simple variation in the system programming.
- All equipment is designed for simple installation and maintenance.
- Low cost life cycle.

## ADDITIONAL FEATURES

Designed to work with solar power 100% isolated. There are different settings depending on the availability of power supply, if there are works in progress, etc.



## ENYSE TECHNOLOGY

**Controller:** Based on redundancy "2 + 2", internal communications, inputs and outputs. Control software with real-time monitoring mechanisms.

**Barrier:** From 4 to 10 m, wind-tested. Broken feather detection system. Possibility of integrating flashing lights into the barrier.

**Road sign (LEDs):** ENYSE offers two solutions:

- Optical and acoustic road signaling.
- Active road signaling: Larger in diameter and more visible, integrated "Another Train" signal, alarm for 30% LED failure, day/night detector.
- Optimized solution for level crossing without barriers (SLA).

**Train signal (LEDs):** Installed at braking distance, the level crossing detects the status of the crossing and informs the driver.

**Warning and reset pedals:** Rail crossing electronic detectors for warnings and resetting the installation.

Short track circuit at level crossing for reset sequences on the installation and as a safety element for protection of the level crossing.

**Local Command:** Independent of the command system, allows the protection system to be controlled by an agent.

## SUPERVISION

Recording system with access via communications to centralize monitoring, control and predictive tele-maintenance using GPRS technology and IP connection.

Remote monitoring provides a quick and efficient response to optimize equipment maintenance (also available for use with mobile devices).

